

Remarks

Claims 2 and 15 are canceled.

Claims 1, 3 and 14 are amended.

Claims 1-14 are now present in this application and are under consideration.

Amendments

The subject matter of claim 2 is incorporated into claim 1. The polyolefin composition is now a polyethylene or polypropylene composition. Claim 2 is canceled as redundant.

Claim 1 is also amended to delete "polyethylene of the metallocene type".

Claim 1 is also amended for formal reasons to change "polyethylene of the "Phillips" type" to "polyethylene prepared with a Phillips catalyst". Support is found in the specification, last full paragraph of page 2 through the paragraph bridging pages 2 and 3.

Claim 1 is amended to delete component d).

Subject matter of claim 3 is incorporated into components c) and f) of claim 1 (benzophenone structure of formula I).

Claim 3 is amended to repair the placement of the term "(Iib)".

Claim 14 is amended for formal reasons.

No new matter is added as a result of any of the present amendments.

Applicants are following the voluntary revised amendment practice guidelines, published in the Official Gazette February 25, 2003. The texts of all claims under examination are presently

submitted. Marked-up versions of the currently amended claims are submitted. Additions are shown with underlining and deletions are shown with strikethrough.

Applicants note that DE 2502015, of record, discloses UV absorbers relevant to present components c), d) and f) of claim 1. Present component d) is deleted. The definition of the hydroxybenzophenone of original claim 3 of formula I is imported into components c) and f). Any potential overlap of the present claims with the disclosure of this reference is removed by amendment.

Rejections under 35 USC 101

Claim 15 is rejected under 35 USC 101 as claiming non-statutory subject matter.

Claim 15 is canceled.

Rejections under 35 USC 112, second paragraph

Claims 1, 2 and 14 are rejected under 35 USC 112, second paragraph for reasons of record.

Claim 2 is canceled and claims 1 and 14 are repaired as discussed above.

In view of the present amendments, Applicants submit that the 35 USC 112, second paragraph rejections are addressed and are overcome.

Rejections under 35 USC 102(b)

Claims 1-13 and 15 are rejected under 35 USC 102(b) as anticipated by JP 9193322 (JP '322).

JP '322 is cited as disclosing a mixture of a hydroxybenzophenone UV absorber and a benzotriazole UV absorber in polyethylene made by metallocene catalyst.

Applicants submit that the amendments to claim 1, canceling subject matter related to metallocene type polyethylene, obviates these rejections.

Rejections under 35 USC 103(a)

Claims 1-13 and 15 are rejected under 35 USC 103(a) as obvious over JP '322 in view of Birbaum, et al., U.S. Pat. No. 5,736,597 (Birbaum '597) or Renz, et al., U.S. Pat. No. 6,191,199 (Renz '199).

As there is no overlap of the present claims with the disclosure of JP '322, as outlined above, this reference can no longer be a relevant primary reference.

Further, as Renz '199 and the present application are commonly assigned to Ciba Specialty Chemicals, Renz '199 does not qualify as prior art under 35 USC 102(e). As Renz '199 issued Feb. 20, 2001, and the present application claims priority of April 4, 2000, Renz '199 cannot be prior art to the present application (WO 00/66675, the PCT equivalent of Renz '199, published Nov. 9, 2000).

Birbaum '597 discloses the combined use of hydroxyphenyltriazine UV absorbers with sterically hindered amines. Birbaum '597 mentions the potential co-use of other UV absorbers among a generic list of potential further additives (col. 40, line 44 to col. 42, line 62). The skilled artisan cannot arrive at the present invention from the combination of the generic disclosure of Birbaum '597 with that of the primary reference. There can be no expectation provided from the combination of Birbaum '597 and JP '322 towards the synergistic stabilization effect shown in the present invention.

In light of the present amendments and the above discussion, Applicants submit that these rejections are addressed and are overcome.

Claims 1-15 are rejected under 35 USC 103(a) as obvious over Birbaum '597, Avar, et al., U.S. Pat. No. 4,891,396 (Avar '396) or Renz '199 alone, or in view of JP '322, Musser, et al., U.S. Pat. No. 4,524,165 (Musser '165), Jollenbeck, et al., U.S. Pat. No. 5,498,345 (Jollenbeck '345), WO 97/39052 (WO '052) or Luethi, et al., U.S. Pat. No. 3,529,982 (Luethi '982).

Applicants respectfully traverse these rejections.

Birbaum '597 discloses the combined use of hydroxyphenyltriazine UV absorbers with sterically hindered amines. Birbaum '597 mentions the potential co-use of other UV absorbers among a generic list of potential further additives (col. 40, line 44 to col. 42, line 62). The skilled artisan cannot arrive at the present invention, aimed at specific UV absorber combinations in polyolefins, from the generic disclosure of Birbaum '597. There can be no expectation provided from the disclosure of Birbaum '597 towards the synergistic stabilization effect shown in the present invention.

The Renz '199 reference is addressed as above.

Avar '396 discloses benzotriazole UV absorbers for polymers. There is no mention of specific combinations of UV absorbers for which a synergistic stabilization effect in polyolefins could be expected. This reference provides no motivation to arrive at the present specific combination of UV absorbers in polyolefins. Further, there can be no expectation provided as to the success achieved with the present invention.

The synergistic stabilization effects of the present UV absorber combinations in polyolefins is displayed in the working Examples. The synergistic stabilization effects are surprising and could not have been predicted from the disclosures of the cited art.

In regard to the secondary references:

JP '322 has been addressed by amendment as discussed above.

Musser '165 discloses specific copolyesterether compositions, which are stabilized with a phenolic antioxidant, a UV absorber and a sterically hindered amine. Musser describes suitable classes of UV absorbers (col. 4 to 6), suitable antioxidants and also suitable sterically hindered amines. There is no mention in the specification that a combination of UV absorbers could have any additional stabilizing effect for these copolyesterethers. Since the invention is directed to specific copolyesterethers, other polymers are not even mentioned. Although example 25 discloses among other components a mixture of a benzotriazole and a benzylidene malonate UV absorber, namely Cyasorb UV-5411 (benzotriazole UVA) Tinuvin 144 (phenolic antioxidant and sterically hindered amine) Weston 618 (phosphite) and Cyasorb UV-1988 (benzylidene-malonate) there is no teaching

for the skilled person to combine exactly those UV absorbers as claimed in the instant invention for polyolefins.

Joellenbeck '345 is directed to a stable aqueous dispersion of a mixture of hydroxybenzophenone UV absorbers and hydroxyphenylbenzotriazole UV absorbers, which is useful for stabilizing colored polyester fibers. The UV absorber dispersion is applied for example together with the dyeing process. These textile applications belong to a completely different field compared to the stabilization of "Phillips type" high density polyethylene. There is therefore no motivation for the skilled person to apply the mixtures of Joellenbeck to HDPE. There is totally lacking the required expectation of success.

WO '052 is directed to the stabilization of polyolefins by a combination of specific sterically hindered amines and a conventional UV absorber. There is no mention of a combined use of UV absorbers in polyolefins. The co-use of UV absorbers is not exemplified.

Luethi '982 describes in 1970 for the first time the use of certain oxalic anilides as effective stabilizers for polymers. This document does not mention any combined use with other classes of UV absorbers.

Applicants submit that the present claims cannot be obvious in view of the primary references cited in these rejections. There is no motivation provided to arrive at the specific stabilizer combinations in polyolefins from the generic disclosures of these references. Further, there can be no expectation of the success achieved with the present invention, that is the synergistic stabilization effect provided for polyolefins.

The secondary references do not rectify the defects of the primary references. JP '322 is moot in view of the present amendments. Musser '165 and Jollenbeck '345 are not aimed at polyolefins and cannot be combined with the primary references to arrive at the present invention. These references further provide no hint towards the synergistic effects achieved with the present invention. WO '052 and Luethi '982 do not mention the combined use of UV absorbers and provide no motivation to do so.

The instant invention discloses and exemplifies the synergistic effect for all claimed combinations. The effect is surprising and cannot be derived from the cited art.

In view of this discussion, Applicants submit that these 35 USC 103(a) rejections are addressed and are overcome.

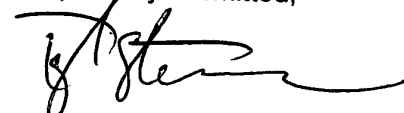
In view of all of the present amendments and remarks, Applicants submit that each of the 35 USC 101, 35 USC 112, second paragraph, 35 USC 102(b) and 35 USC 103(a) rejections are addressed and are overcome.

The Examiner is kindly requested to reconsider and to withdraw the present rejections.

Applicants note that the Fourth Supplemental Information Disclosure Statement, mailed to the PTO January 24, 2003, had apparently not been considered as of the mailing of the present Office Action. The Examiner is kindly requested to indicate that the references cited therein are considered by returning an initialed PTO form 1449. The DE 2502015 reference cited therein is addressed as discussed above.

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JUN 13 2003